REMARKS

Status of the Claims

The pending claims are now claims 1-2, 4, 6, 9-13, 15-17 and 20-22. Claim 3 is cancelled herein. In a preliminary amendment, previously made of record, claims 5, 7-8, 14, and 18-19 were cancelled. In a requirement for restriction, Applicants elected the single subspecies drawn to MCM-22 and claims 6 and 23-31 were withdrawn.

RE: Claim Amendments

Claim 1, and the pending claims depending therefrom, have been amended to recite a process for preparing an alkylaromatic hydrocarbon composition wherein, *inter alia*, said mono-olefin oligomers comprise at least 20% by weight of olefins having at least 12 carbon atoms and said olefins having at least 12 carbon atoms and an average of from 0.8 to 2.0 C1-C3 alkyl branches per carbon chain and no branches other than ethyl groups. The support for this amendment may be found in paragraph [0025] in the specification as filed.

Claim 3 is cancelled to be consistent with amended claim 1.

RE: New Claim

New claim 32 is added which recites: A process for preparing an alkylaromatic hydrocarbon composition comprising the steps of: (a) oligomerizing an olefin selected from propylene, n-butene and mixtures thereof, over a catalyst comprising ZSM-23 and a surface deactivating agent, to form a oligomerization product comprising at least 95% by weight of mono-olefin oligomers of the empirical formula:

$$C_nH_{2n}$$

wherein n is greater than or equal to 10, wherein said mono-olefin oligomers comprise at least 20% by weight of olefins having at least 12 carbon atoms and said olefins having at least 12 carbon atoms have an average of from 0.8 to 2.0 C_1-C_3 alkyl branches per carbon chain; (b) contacting the oligomerization product and an aromatic compound under alkylation conditions with an aromatic alkylation catalyst comprising an

MCM-22 family molecular sieve having an X-ray diffraction pattern including d-spacing maxima at 12.4±0.25, 6.9±0.15, 3.57±0.07 and 3.42±0.07 Angstroms, wherein the oligomerization product is not subject to any pretreatment other than to remove the surface deactivating agent prior to the contacting step. The support for this new claim may be found in paragraphs [0025], [0026], [0034] and [0036] in the specification as filed.

RE: Section 103 Rejections

Claims 1-4, 6, 9-13, 15-17, 20-23 were rejected under 35 USC Section 103(a) as being unpatentable over Blain et al. (U.S. Patent 5026933) in view of Le et al. (U.S. Patent 4962256) or Le in view of Blain. According to Examiner, Blain discloses a process for making detergent-grade olefin oligomers having characteristics as called for in the present claims in the presence of ZSM-23 as called for in claim 9, whereas Le discloses a process for production of detergent-grade long chain olefins in the presence of MCM-22 cocatalyst. The Examiner determined that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Blain process by using MCM-22 as the alkylation catalyst to arrive at the claimed process since Le discloses that the alkylation catalyst provides the alkylaromatic predominantly in the 2- or 3-positions.

Alternatively, the Examiner determined that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Le process by using the olefins produced by Blain since the olefin oligomers may be used as alkylating agents to prepare biodegradable alkylbenzene and alkylphenylsulfonates.

Applicant submits that pending claims 1-2, 4, 6, 9-13, 15-17, 20-23 are patentable over Blain and Le, either alone or in combination, because these references do not teach or suggest an olefin hydrocarbon mixture having mono-olefin oligomers which comprise at least 20% by weight of olefins having at least 12 carbon atoms and said olefins having at least 12 carbon atoms have an average of from 0.8 to 2.0 C_1-C_3 alkyl branches per carbon chain and no branches other than ethyl groups, as now claimed. Rather, Blain teaches alkylation mono-olefin oligomers having branches that are only methyl group a

(See Blain, col. 5, line 40 to col. 7, line 2). While Le generically discloses branched alkylating agents, especially oligomerized olefins such as trimers, tetramers, pentamers, etc., of light olefins such as ethylene, propylene the butylenes, etc. (See Le col. 4, lines 21 to 24), Le is silent with respect to olefin having at least 12 carbon atoms and an average of from 0.8 to 2.0 C1-C3 alkyl branches per carbon chain and no branches other than ethyl groups, as now claimed.

Applicant submits that new claim 32 is patentable over Blain and Le, either alone or in combination, because these references do not teach a process for producing a process for producing an alkylaromatic compound which recites, *inter alia*, step (b): contacting the oligomerization product and an aromatic compound under alkylation conditions with an aromatic alkylation catalyst comprising an MCM-22 family molecular sieve having an X-ray diffraction pattern including d-spacing maxima at 12.4±0.25, 6.9±0.15, 3.57±0.07 and 3.42±0.07 Angstroms, wherein the oligomerization product is not subject to any pretreatment other than to remove the surface deactivating agent prior to the contacting step, as claimed in new claim 32.

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The instant application is believed to be in order for allowance, and a speedy notice of allowance or another Office Action on the merits is respectfully requested. Applicants request a personal or telephone interview with Examiner to address any outstanding issues.

Respectfully submitted,

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